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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,349	02/12/2007	Christian Moller	55320.002081	8166
21967 7590 08/06/2008 HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109				
EXAMINER				
PATEL, FUNAM				
ART UNIT		PAPER NUMBER		
2855				
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08/06/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/590,349

**Applicant(s)**

MOLLER, CHRISTIAN

**Examiner**

PUNAM PATEL

**Art Unit**

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-824)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 10/18/2006, 11/27/2006

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of Invention I (the method utilizing a heat capacity principle) in the reply filed on 07/02/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 6-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Note that Claim 11 depends on claim 9. Due to a clerical error Claim 11 had been mistakenly identified as a generic claim in the restriction requirement made on 06/02/2008.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 12, 13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Prokopius (US 3,898,882).**

With respect to Claims 1 and 15, Prokopius discloses a method of measuring mass flow of a first component in a gas consisting of one or more known gas components (Fig. 1, the test gas), which gas flows in a pipe in which several measurement devices are arranged in connection with the pipe (#s 10, 11), said method comprising the following steps:

a continuous determination of the temperature and pressure of the gas by means of the measurement devices; and

determination of the mass flow of the one gas component by means of the determination of temperature and pressure. See Fig. 1, #13.

With respect to Claims 12 and 13, Prokopius discloses determining the mass flow of a first gas component being in saturation state (col. 4: 49-50, water vapor).

**Claims 1-5, 12, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Proffitt et al. (US 5,415,024).**

With respect to Claims 1 and 15, Proffitt et al. disclose a method of measuring mass flow of a first component in a gas consisting of one or more known gas components (col. 1: 10-12, the multi-component fluid system), which gas flows in a pipe in which several measurement devices are arranged in connection with the pipe (#s 24, 26, 28, 30, 36, and 38), said method comprising the following steps:

a continuous determination of the temperature and pressure of the gas by means of the measurement devices (col. 4: 20-25); and

determination of the mass flow of the one gas component by means of the determination of temperature and pressure (col. 4: 26-46).

With respect to Claim 2, Proffitt et al. disclose a tubular body (#12, heated conduit surrounded by the insulation, #18) in connection with the pipe (#s 14 and 16, inlet and outlet conduits), and wherein the method further comprises the step of supplying a given amount of energy to the gas in the tubular body (#12). See col. 4: 10-21.

With respect to Claims 3-5 and 16, Proffitt et al. disclose the step of determining the temperature and pressure comprising:

determining the volume of gas by using the temperature measurements (obtained via the temperature sensors), the pressure measurements (obtained with the pressure sensors), the volumetric flow measurements (obtained with a flowmeter, #32), and an iterative computation process (using a computer, #58);

determining the gas temperature at the inlet of the tubular body (#24,  $T_i$ ); and

determining the gas temperature at the outlet of the tubular body (#26,  $T_o$ ). See col. 3: 55-59. All of the sensing devices and the computer are utilized to indirectly compute the volume of gas and the combination thereof is read as the volume percentage measurement instrument.

With respect to Claim 12, Proffitt et al. disclose determining the mass flow of a first gas component being in saturation state (col. 3: 3-8).

With respect to Claim 14, Proffitt et al. disclose the gas being a biogas (col. 1: 18-21).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art discloses improving known multi-component fluid analyzers by introducing a direct gas volume fraction measurement device to existing flow instrumentation: S. A. Tjugum, B. T. Hjertaker, G. A. Johansen, "Multiphase flow regime identification by multibeam gamma-ray densimetry." Meas. Sci. Technol. 13 (2002) pp. 1319-1326.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PUNAM PATEL whose telephone number is (571)272-6794. The examiner can normally be reached on Monday to Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP  
08/01/2008

/Michael Cygan, Ph.D., J.D./  
Primary Examiner, Art Unit 2855